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38845 7590 01/21/2005	EXAMINER
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2133	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>09 December 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>50-118</u> is/are pending in the application.

  4a) Of the above claim(s) <u>74-98,101-103,105,106 and 108-118</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>50-73,99,100,104 and 107</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>12 January 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

  a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election with traverse of group 1 (Claim 50-73, 99-100, 104, and 107)

in the reply filed on 12/09/2004 is acknowledged. The traversal is on the ground(s) that

"there is no serious burden on the examine"..."For example, comparing Claim 100 (from

Group I), Claim 111 (from Group II), and Claim 97 (from Group VI), it is respectfully

submitted that it should be readily apparent that a search for one of these claims is

highly relevant to the other two claims". This is not found persuasive because each of

the claims 100, 111 and 97 are comprised of the limitations in their respective base

claims and composite claim 100,61,50; claim 111,75,74 and claim 97 all recite elements

not contained in the other composite claims. For example; nowhere do claims

111,75,74 and claim 97 recite the following language found in claim 50: "selecting a

data pattern from a set of at least one **pre-programmed** data pattern, **wherein each**

pre-programmed data pattern of the set of at least one pre-programmed data

pattern includes a plurality of portions; creating the selected data pattern, <u>wherein</u>

<u>creating the selected data pattern includes:</u> f*or each of the plurality of portions of the*

selected data pattern that is pre-programmed for algorithmic pattern generation,

<u>performing a pre-programmed algorithm to create the portion;</u> and **for each of the**

plurality of portions of the data patterns that is stored based on the pre-

programming of the selected data pattern, retrieving the portion" [Emphasis

added]. Nowhere does claims 100,61,50 recite the following language found in claims

74 and 75: "**generating a computer-readable algorithm** that is configured to provide

at least one portion of a plurality of portions of a data pattern through algorithmic pattern

generation; and <u>storing at least one other portion of the plurality of portions in **a look-up**

table</u>"..." **generating at least one other computer-readable algorithm** that is

configured **to provide** at least one other portion of a plurality of portions of another data

pattern through algorithmic pattern generation such that **the computer-readable**

algorithm and the other computer-readable algorithm comprise a plurality of

computer-readable algorithms that are stored in a computer-readable medium,

and <u>such that **the computer-readable medium is configured *to regenerate*** a plurality</u>

<u>of data patterns including the data pattern and the other data pattern</u>" [Emphasis

added]. Nowhere do claims 100,61,50 recite the following language found in claim 97:

"<u>configuring a state machine with, for each of *a plurality of component video data</u>*

<u>patterns</u>, a sequencing for regenerating each of the component video data patterns</u>"..."

<u>selecting one of the plurality of *component video patterns*</u>" [Emphasis added].

Hence claim 111 cannot be considered a linking claim linking a means for generating a

computer-readable algorithm used for generating test patterns (claims 111,75,74) to a

method for generating test patterns (claims 100,61,50) since all of the limitations in

claims 74, 75 and 111 are not in claims 50, 61 and 100 and vice versa. Likewise, claim

97 cannot be considered a linking claim linking a means for configuring a state machine

used for generating test patterns (claim 97) to a method for generating test patterns

(claims 100,61,50) since all of the limitations in claims 74, 75 and 111 are not in claims

50, 61 and 100 and vice versa.

In addition, independent claims 50, 74 and 97 determine the broadest search that the Examiner must perform; hence the claims are properly classified according to the limitations in each of the claims. Claim 50 is directed pattern generation using a particular algorithm. Claim 74 is directed generating a computer-readable algorithm used for generating test patterns using a look-up table. Claim 97 is directed to a state machine used for pattern generation. An initial word search for claim 50 in East ((pattern adj (generation generating)) and (algorithm algorithmic deterministic)) produces 2063 patents. An initial word search for claim 74 in East ((pattern adj (generation generating)) and (look-up lookup)) produces 723 patents, 295 of which are not in the original search for claim 50, and an initial word search for claim 97 in East ((pattern adj (generation generating)) and (state adj machine)) produces 423 patents, 156 patents of which are not in the originals search for claim 50. That is, to properly examine groups II and VI would require researching an addition 423 patents for Group II and an additional 156 patents for group VI. The Examiner asserts that searching Groups II and VI along with Group I would be an additional burden to the Examiner. The requirement is still deemed proper and is therefore made FINAL.

Claims 74-98, 101-103, 105, 106 and 108-118 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 12/09/2004.

Specification

2.   The disclosure is objected to because of the following informalities: Pre-

programmed data patterns introduced in newly amended claims 50-73,99,100,104 and

107 is critical or essential to the practice of the invention, but not included in the

claim(s) is not enabled by the disclosure. .

Appropriate correction is required.

Claim Objections

3.   Claim 99 is objected to under 37 CFR 1.75(c) as being in improper form because

a multiple dependent claim must be written in the alternative form. See MPEP

§ 608.01(n). Accordingly, the claim 99 has not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 50-73, 99, 100, 104 and 107 are rejected under 35 U.S.C. 112, first

paragraph, as based on a disclosure which is not enabling. Pre-programmed data

patterns is critical or essential to the practice of the invention, but not included in the

claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188

USPQ 356 (CCPA 1976). The term "pre-programmed data patterns" is new matter.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 50-73, 99, 100, 104 and 107 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

Lines 6-8 of claim 1 recites, "for each of the plurality of portions of the selected data

pattern that is pre-programmed for algorithmic pattern generation, performing a pre-

programmed algorithm to create the portion" and is contradicted by lines 2-4 recite,

"selecting a data pattern from a set of at least one pre-programmed data pattern,

wherein each pre-programmed data pattern of the set of at least one pre-programmed

data pattern includes a plurality of portions". Note: lines 2-4 of claim 1 state that "each

of the plurality of portions" are included in the "pre-programmed data pattern" from

which the "selected data pattern" is selected. If they are included, they exist and do not

require a step to create them.

Claim 1 recites the limitation "creating the selected data pattern" in line 5. Lines 2-4

state that the "selected data pattern" is selected from a set of at least one pre-

programmed data pattern, hence the "selected data pattern" is one of the "pre-

programmed data pattern". Lines 2-4 in claim 1 state that the "selected data pattern"

already exists. The statement "creating the selected data pattern" in line 5 is

contradictory.

Claim 57 recites, "wherein the algorithmic pattern generation is accomplished, **in part**,

by a state machine". The term "in part" is indefinite.

Claim 60 recites, "wherein the algorithmic pattern generation is accomplished, **in part**,

by a state machine". The term "in part" is indefinite.

Claim 100 recites the limitation "the set of at least one data pattern" in lines 2-3. There

is insufficient antecedent basis for this limitation in the claim.

Claim 100 recites, "wherein creating the selected test pattern includes regenerating the

selected test pattern". The regenerated "selected test pattern" and the created

"selected test pattern" are both referred to as "the selected test pattern". If regenerating

is different from creating the regenerated "selected test pattern" should not be the same

as the created "selected test pattern".

Claim 104 recites the limitation "the set of at least one data pattern" in line 3. There is

insufficient antecedent basis for this limitation in the claim.

Claims 50-73, 99, 100, 104 and 107 are rejected under 35 U.S.C. 112, second

paragraph, as being incomplete for omitting essential structural cooperative

relationships of elements, such omission amounting to a gap between the necessary

structural connections. See MPEP § 2172.01.

Lines 6-8 of claim 1 recites, "for each of the plurality of portions of the selected data

pattern that is pre-programmed for algorithmic pattern generation, performing a pre-

programmed algorithm to create the portion" and is contradicted by lines 2-4 recite,

"selecting a data pattern from a set of at least one pre-programmed data pattern,

wherein each pre-programmed data pattern of the set of at least one pre-programmed

data pattern includes a plurality of portions". The omitted structural cooperative

relationships are: the relationships between "for each of **the plurality of portions** of the

selected data pattern that is pre-programmed for algorithmic pattern generation,

performing a pre-programmed algorithm **to create the portion**", "selecting a data

pattern from a set of at least one pre-programmed data pattern, wherein each pre-

programmed data pattern of the set of at least one pre-programmed data pattern

includes **a plurality of portions**" and "for each of **the plurality of portions** of the data

patterns that **is stored** based on the pre-programming of the selected data pattern,

retrieving the portion".

In addition, the omitted structural cooperative relationships are: the relationships

between the "plurality of portions" included in the "at least one pre-programmed data

pattern", the created portion and the stored "plurality of portions".

Claim 57 recites, "wherein the algorithmic pattern generation is accomplished, in part,

by a state machine". The omitted structural cooperative relationships are: the

relationships between "the algorithmic pattern generation" and "a state machine".

Claim 57 recites, "wherein the algorithmic pattern generation is further accomplished by

a plurality of tables". The omitted structural cooperative relationships are: the

relationships between "the algorithmic pattern generation" and "a plurality of tables".

Claim 61 recites, "pre-programming at least one data pattern to provide the set of at

least one pre-programmed data pattern." The omitted structural cooperative

relationships are: the relationships between a "data pattern" and a "pre-programmed data pattern".

Claim 100 recites, "wherein the set of at least one data pattern includes the plurality of component video patterns". The omitted structural cooperative relationships are: the relationships between "the set of at least one data pattern" and "the plurality of component video patterns". Note the relationship between "the set of at least one data pattern" and "the plurality of component video patterns" is indefinite because it is not clear which of the at least one data pattern includes the plurality of component video patterns and how many of the component video patterns each data pattern includes.

Claims 50-73, 99 and 100 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. Claim 1, recites, "A method for testing a television". The omitted elements are: an connection to the television being tested in the preamble and the limitations in claims 50-73, 99 and 100.

The Examiner asserts that claims 50-73, 99, 100, 104 and 107 are replete with 35 U.S.C. 112, as pointed out above. The claims need to be reviewed and corrected to remove all problems especially those stemming from lack of antecedent basis and omission of structural relationships.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   Claims 50-73, 99, 100, 104 and 107 are rejected under 35 U.S.C. 101 because

the claimed invention is directed to non-statutory subject matter. Claims 50-73, 99, 100,

104 and 107 recite an algorithm that can be carried out by hand with no tangible

connection to any hardware necessary for testing a television.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7.   Claims 50, 52, 54-64 and 66-73 are rejected under 35 U.S.C. 102(b) as being

anticipated by Wilensky; Barry F. et al. (US 4513318 A, hereafter referred to as

Wilensky).

35 U.S.C. 102(b) rejection of claims 50 and 61.

Wilensky teaches selecting a data pattern from a set of at least one pre-programmed

data pattern (col. 9, lines 15-16 in Wilensky teaches selecting character from a set of at

least one pre-programmed characters preprogrammed and stored in character memory

87 in Figure 4; col. 8, lines 62-65 in Wilensky teaches that each character is a portion of

a test pattern; hence Wilensky teaches selecting a data pattern from a set of at least

one pre-programmed character data pattern), wherein each pre-programmed data

pattern of the set of at least one pre-programmed data pattern includes a plurality of

portions (col. 9, lines 56-60 teach each character is made up of pixels; hence Wilensky

teaches that each pre-programmed character data pattern of the set of at least one pre-

programmed character data pattern includes a plurality of pixel portions); creating the

selected data pattern, wherein creating the selected data pattern includes: for each of

the plurality of portions of the selected data pattern that is pre-programmed for

algorithmic pattern generation, performing a pre-programmed algorithm to create the

portion (Figure 5 of Wilensky is an algorithm for creating a data pattern whereby for

each of the plurality of character portions of the selected data pattern that is pre-

programmed for algorithmic pattern generation, performing a pre-programmed algorithm

to create the portion); and for each of the plurality of portions of the data patterns that is

stored based on the pre-programming of the selected data pattern, retrieving the portion

(Figure 5 of Wilensky teaches for each of the plurality of character portions of the data

patterns that is stored based on the pre-programming of the selected data pattern,

retrieving the portion form character memory 87 in Figure 4).

35 U.S.C. 102(b) rejection of claims 52.

The shift register in Figure 4 in Wilensky is a state machine; hence Wilensky teaches

the providing of the data stream is performed utilizing state machine generated data

(Note: sequential logic such as shift registers are state machines).

35 U.S.C. 102(b) rejection of claims 54-58.

Character memory 87 in Figure 5 of Wilensky is a look-up table whereby when the data

pattern is selected, starting the state machine and initiating sample, packet, and look-up

signals to control Frame buffer memory 83, row and Column counter 89 and Character

memory look-up table 87; and creating the selected data pattern from at least one of a

look-up table and the state machine by tracking a location in a data sequence of the

selected test pattern and transitioning between states according to the pre-programming

(col. 5, lines 1-16, Wilensky).

35 U.S.C. 102(b) rejection of claims 59 and 60.

The shift register in Figure 4 in Wilensky selects data patterns.

35 U.S.C. 102(b) rejection of claims 61-64, 67 and 70-73.

Claim 1 in Wilensky teaches that a "high level statement of a pattern" is issued to select

a test pattern; hence "high level statement of a pattern" is a data selection signal. Col.

8, lines 57-68 in Wilensky teaches that a test pattern is generated for the video display

system in response to the high level statement data selection signal. Claim 1 in

Wilensky teaches that the data stream utilizes algorithmically generated pattern

segment data; note: claim 1 explicitly provides an algorithm for constructing new pattern

segments. Col. 8, lines 57-68 in Wilensky teaches that stored character data is utilized

to produce the data stream.

35 U.S.C. 102(b) rejection of claims 66 and 68.

Col. 9, lines 56-60 teach each character is made up of pixels; hence Wilensky teaches

that each pre-programmed character data pattern of the set of at least one pre-

programmed character data pattern includes a plurality of pixel portions.

35 U.S.C. 102(b) rejection of claims 69.

Col. 9, lines 23-26 in Wilensky teaches repeating characters.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.

    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

8.   Claims 51, 53 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilensky; Barry F. et al. (US 4513318 A, hereafter referred to as Wilensky).

35 U.S.C. 103(a) rejection of claim 51 and 65.

Wilensky, substantially teaches the claimed invention described in claims 1-3, 6, 9, 10, 16-18, 21, 24 and 25 (as rejected above).

However Wilensky, does not explicitly teach the specific use of a checksum generator. Jarwala, in an analogous art, teaches the use of checksum generators whereby verification is performed by checking if the checksum values match (Col. 7, lines 5-40 in Jarwala). Note: in col. 7, lines 37-40, Jarwala teaches that checksum can be used to verify the test program's integrity. One of ordinary skill in the art at the time the invention was made would have been highly motivated to combine the teaching in the Jarwala patent with the teachings in the Wilenski patent to ensure the integrity of the test pattern data in the Wilenski patent (col. 7, lines 37-40, Jarwala).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wilenski with the teachings of Jarwala by including use of a checksum generator. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of a checksum generator would provide the opportunity to ensure the integrity of the test pattern data in the Wilenski patent (col. 7, lines 37-40, Jarwala).

35 U.S.C. 103(a) rejection of claim 53.

Wilensky, substantially teaches the claimed invention described in claims 1-3, 6, 9, 10, 16-18, 21, 24 and 25 (as rejected above). In addition, Figure 5 in Wilenski teaches determining if a different data pattern is selected; and if a different data pattern is selected: asserting a pattern change signal.

However Wilensky, does not explicitly teach the specific use of a checksum generator. Jarwala, in an analogous art, teaches the use of checksum generators whereby verification is performed by checking if the checksum values match (Col. 7, lines 5-40 in Jarwala). Note: in col. 7, lines 37-40, Jarwala teaches that checksum can be used to verify the test program's integrity. One of ordinary skill in the art at the time the invention was made would have been highly motivated to combine the teaching in the Jarwala patent with the teachings in the Wilenski patent to ensure the integrity of the test pattern data in the Wilenski patent (col. 7, lines 37-40, Jarwala).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wilenski with the teachings of Jarwala by including use of a checksum generator. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of a checksum generator would provide the opportunity to ensure the integrity of the test pattern data in the Wilenski patent (col. 7, lines 37-40, Jarwala).

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph D. Torres whose telephone number is (571)

272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

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Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD
Primary Examiner
Art Unit 2133